

FOURTH ANNUAL REPORT
OF THE
DIRECTORS
OF THE
Woodstock Railroad Company,
For the year ending December 31, 1870.

The Directors of the WOODSTOCK RAILROAD COMPANY respectfully submit to the stockholders this their fourth annual report for the year ending December 31, 1870.

The total amount of work from the commencement to the present date in cubic yards has been as follows:

Earth Excavation,	525,467
Solid Rock,	11,741
Loose Rock,	2,017
Rotten Rock,	851
Bridge masonry, 1st class,	518.3
" " 2d class,	1,537.5
Culvert masonry,	6,403
Paving,	1,747.4

For the amount of masonry and excavation uncompleted reference is had to the accompanying report of the Engineer.

The land damages for the whole line have been adjusted and paid, except three cases, one of which is the land in the occupancy of Col. Nutt and wife. At the time the commissioners were out, Col. Nutt and wife did not incline to fix upon any definite sum, but agreed with the directors that they might proceed with the work, and when completed, if the amount of damages could not be settled by the parties, the commissioners might assess the same. The other two cases are of very small amount.

The total amount paid for construction from the commencement of the work to this date, is as follows:

For construction account,	\$246,471 96
Engineering,	9,930 14

TREASURER'S REPORT.

Balance on hand January 1, 1870,	\$1061 05
Received from assessments on capital stock and interest on the same,	9220 37
Cash borrowed from bank,	4655 03
" " of Governor Smith,	6000 00
" " of various persons to pay laborers,	2000 00
Received from other sources,	326 63
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	\$23,263 08

The Treasurer has paid on construction

account,	\$12,952 80
Borrowed money and interest on same,	9,739 95
On engineering account,	218 40
Incidentals	216 96

Leaving balance in treasury, \$134 97

CHARLES P. MARSH, Treasurer.

Woodstock, January 1, 1871.

FRANK N. BILLINGS, { Auditors.
LEWIS PRATT,

Stationery, revenue stamps, postage stamps and telegraphing,	348 93
Printing and incidentals,	744 06
Land damages,	13,256 27
Interest on loans,	435 62
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	\$271,186 98

The outstanding liabilities of the company are as follows:

To Frederick Billings for cash furnished for the prosecution of the work,	\$10,000 00
Interest due on the same,	555 00
A. G. Dewey for same,	8,041 00
To Woodstock Bank,	4,241 97
J. G. Smith,	6,000 00
Interest due on the same,	438 00
Cash raised by individual subscription to pay laborers,	2,000 00
Frederick Billings, cash paid for engraving bonds and revenue stamps for same,	685 37
Judge Redfield for professional services,	400 00
Due engineers,	800 00
Northern Railroad Company for fence posts,	150 11
Due various other persons on unadjusted items, about,	250 00
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	\$33,561 45

A small balance of interest is due on a portion of the above items, which cannot be accurately figured at this time.

Nothing has yet been paid, as compensation for services, to any of the officers of the company, except the engineer, and nothing to S. S. Thompson, Esq., who early rendered very valuable services. Expenses have been incurred for costs and counsel fees in pending suits, which have not been adjusted.

The amount now remaining due on subscriptions to the capital stock, and notes given on account of such subscriptions, is \$14,070 97, most of which has been turned over to the bank and individuals as security for money loaned for construction.

The personal property on hand remains the same as at the last annual report, \$4,740 41.

ALBERT G. DEWEY, CHARLES DANA, FRANCIS W. CLARKE, LEWIS PRATT, FRANK N. BILLINGS, CHARLES S. RAYMOND, OTIS CHAMBERLIN, PROSPER MERRILL,	} Directors.
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ENGINEER'S REPORT.

To the Hon. Albert G. Dewey, President of the Woodstock Railroad Company:

This, my fourth annual report to the Directors of the Woodstock Railroad Company, showing the progress of the work of construction of the Woodstock Railroad and the doings of the engineering department from the 31st day of December, A. D. 1869, to December 31st, A. D. 1870, and also showing the present situation of the road-bed, is respectfully submitted.

I. LOCATION OF THE ROAD.

At the time of making my last annual report, the place for the western terminus had been fixed upon and a sufficient quantity of land had been procured of J. D. Hewitt and F. B. Merrill, and the grounds had been laid out and a large amount of material had been removed in fitting them for the purposes of depot accommodations. The change in the line near Henry C. Johnson's had been made, and, also, all the alterations, in the public highway, rendered necessary by such change, had been made and the crossings fitted for the public travel. All the other changes mentioned in that report had, likewise, been made and the work laid out in conformity with such alterations. No other alterations have been found necessary except a very slight modification in the line near station 235, on land of Osman and Seth Wood, where the line had been made to pass, by a curve of comparatively short radius, partly round a ridge of hardpan that stood out towards the Ottaquechee river, sloping rapidly towards its southern bank. Here, by making the line pass more directly through the ridge, a much safer and less curving line could be made that would entirely obviate all the difficulty and danger that might arise from attempting to pass round the ridge on a curve whose convex side was towards the rapidly descending river's bank. No other alterations have been made, nor is it probable that any will be made, unless found necessary in making the proper connections with other roads. But of this nothing can now be known.

II. PROGRESS OF CONSTRUCTION.

At the beginning of the year 1870 the greatest force of workmen was employed at the Shallies Hill cut, where there were four gangs engaged, two on the earth work at the northerly end of the cut, and one on earthwork and one on solid rock at the southerly end. The work was continued with as much energy and force as the season of the year and the character of the work would permit; as the work became contracted by drawing towards the close, fewer men could be employed to advantage, and the more it was affected by the frosts and the severity of a Vermont winter. Besides the four gangs of workmen at Shallies Hill there was one company at work on the depot grounds at the western terminus of the road; one on the large embankment near Daniel Knowlton's; one on the cut below Taftsville on lands of J. H. Tracy and E. C. Emmons; one on the hardpan cut near station 235 on land of Osman and Seth Wood; one near station 260 on U. M. Church's land, and there were also a few men employed on a large embankment that had been injured by the October freshet of 1869, and on a hardpan cut near station 633 on land of William Roberts.

The work on the depot ground was continued till the greater part of the necessary excavation was completed and the ground brought nearly to the proper level. The ground has been enlarged on the northerly side from the first survey and is now deemed to be amply sufficient for the storing of lumber and merchandize when the road is completed and put in operation, and the removal of a few hundred yards of earth is all that is necessary to bring the surface to the proper form for the side tracks and buildings required at the western terminus of the road for all the purposes of trade, transportation, storage and travel.

The sand and gravel cut near H. C. Johnson's was nearly all finished and the material was used in making the embankment on Mr. Barker's land, which is not yet fully completed. The hardpan cut near Mr. Knowlton's could not be worked at this season of the year, nor was the material suitable to make the embankment that was to be made from that cut, exposed as it is to the action of high water from the river. A borrowpit was, therefore, opened in a gravel bank on the land taken of Daniel Knowlton, and the embankment was made, as far as it could be made at that time, from a material of a more permanent and durable character; and, though made at that season of the year, it suffered but little injury from the effect of the frost or the freshets consequent on the opening of spring. The cut near Taftsville

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was nearly completed and the embankment on the southerly bank of the river on land of Edwin C. Emmons was made, and, though the material was not the best for such an embankment, it has been but little affected by the action of high water. The work near station 235 rendered necessary by a change in the line, as before described, has been completed; and the cut from station 254 to 264, on the steep bank of the river on land of U. M. Church was wholly completed. The work at "Shallies Hill" was pressed forward as rapidly as possible and more than four thousand cubic yards of earth and rock were removed during the winter months. About one thousand cubic yards have been taken from the hardpan cut on land of W. H. H. Braley, and some additions have been made to the deep embankments near station 606.

The work at these several places was moving on with commendable zeal, when, on the 15th of March, the work was for a time suspended and has not yet been resumed.

The whole amount of work done on the entire line, exclusive of small amounts done as extra work, previous to January 1, 1870, was as follows:

Earth excavation,	525,467	cubic yards.
Rotten rock,	851	" "
Loose rock,	2,017	" "
Solid rock,	11,741	" "
Bridge masonry, 1st class.	518.3	" "
" " 2nd "	1,537.5	" "
Culvert "	6,403	" "
Paving,	1,747.4	" "

The whole amount of work done each month of the present year, before the time of suspending the work, is as follows:

JANUARY.

Earth excavation,	11,153	cubic yards.
Loose rock,	25	" "
Solid rock,	190	" "

FEBRUARY.

Earth excavation.	7,375	cubic yards.
Loose rock,	7	" "
Solid rock,	192	" "

MARCH.

Including numerous small underestimates which were added at the time of making a final measurement of all the work done, and excluding three small amounts where the work had been overestimated:

Earth excavation,	2,698	cubic yards.
Solid rock,	64	" "

Making the whole amount of work done on the line, as measur-

ed in cubic yards, exclusive of several small amounts done as extra work, as follows:

Earth excavation, except at Shallies Hill.	474,002	cubic yards.
Earth at Shallies Hill,	72,691	" "
Rotten rock,	851	" "
Loose Rock,	2,049	" "
Solid rock,	12,187	" "
Bridge masonry, 1st class,	518.3	" "
Bridge masonry, 2nd class.	1,537.5	" "
Culvert masonry,	6,403	" "
Paving.	1,747.4	" "

By a careful estimate made since the work on the line was suspended, there now remains in the cuts 23,209 cubic yards. Of this quantity 1,313 yards are on the eastern division, 18,000 yards in the Shallies Hill cut, and 3,896 yards in the western division, and are situated along the line as follows: 627 yards on the depot ground at the western terminus near J. D. Hewitt's, 143 yards in the cut on H. C. Johnson's land, 256 yards on land of the late Robert Barker, 177 yards on land of E. G. Mower, 531 yards in two cuts on land of Solomon Woodward, 1,006 yards on Daniel Knowlton's land, 21 yards in the highway near David Hathaway's, 284 yards in the cut near Taftsville on land of E. C. Emmons, 714 yards on land of J. H. Tracy, 74 yards on Dr. Joseph Gray's land, and 63 yards on land of U. M. Church. All the remaining cuts in the western division have been completed. In the Shallies Hill cut the estimated amount of earth and rock is 18,000 cubic yards, that is, 17,000 yards of earth and 1,000 yards of rock, but the relative quantities of these may vary from this estimate and slightly increase or diminish the whole amount the in cut to be removed. On the eastern division, 242 yards are in a cut on land of Harvey Tracy, 289 yards on land of William H. H. Braley, 359 yards on land of William Roberts, and 423 yards on land of A. S. Pierce. Making the sum of 23,209 cubic yards in the cuts to be removed on the entire line.

But it must not be understood that the removal of this amount is all that is necessary to complete the road-bed and fit it for the superstructure; for, in many places the embankments have, from their own weight, become compressed and have settled below the grade line, and require a refitting before the track is laid; and, also, in many places, small cuts have been made in the embankment, by the action of surface water, that often requires a considerable amount of material to bring the whole to a proper width to insure the safety of the superstructure; and this last has

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been found to be an important item in making a reliable estimate of the amount of work necessary to finish the road-bed.

The following estimate is believed to be as reliable as any that can now be made of the cost of fitting the road-bed, bridges, cattle guards, trestle work, &c., for the superstructure through the entire line :

Earth work, except at Shallies Hill.	19,000 cubic yards.
Earth work, at Shallies Hill.	17,000 " "
Loose rock,	400 " "
Solid rock,	1,000 " "
Culvert masonry.	100 " "
Lumber not paid for, in feet,	110,000
The cost of this at the prices paid on the contract with Ralph Jones & Co., and lumber at the lowest cash price, would be,	\$20,560
Add to this the estimated cost of the bridge at the "gulf,"	
exclusive of lumber paid for,	7,000
Small bridges, exclusive of lumber,	150
Cattle guards, exclusive of lumber,	200
Putting up 650 feet of trestle work,	1,290
Trestle work over two deep ravines.	3,000
Engineering,	1,760
Balance of fencing,	5,000
Land damage. unpaid.	1,000
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	\$39,960

III. EXPENSE OF ENGINEERING.

At the close of the year 1869 there was but one assistant engineer, Mr. Owen Phillips, employed on the line, and he continued in the same capacity till the first of April, when his services being no longer needed, he was released from his connection with the department, and no one has since been employed in that capacity.

The whole expense of engineering from the first of January, 1868, to the first of January, 1870, was, as given in the last annual report \$8,200 00. This is the amount paid for engineers' services and their expenses as connected with the department, but there is a small amount paid for teams, feed, &c., not here included.

The cost of engineering from the first of January, 1870, to the first of January 1871 was \$918 00, which, added to the above amount, gives \$9,118 00 as the whole expense of the department from January 1, 1868, to January 1, 1871.

HOSEA DOTON,

Engineer Woodstock Railroad.